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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/442,773	11/18/1999	RYUICHI KATAYAMA	016778/0398	6370

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EXAMINER
PSITOS, ARISTOTELIS M

ART UNIT	PAPER NUMBER
2653	17

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/442,773	KATAYAMA, RYUICHI	
	Examiner	Art Unit	
	Aristotelis M Psitos	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-20* is/are pending in the application.

4a) Of the above claim(s) *6-15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,16,18 and 20* is/are rejected.

7)☒ Claim(s) *17, 19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Applicant's response of 7/24/03 has been considered with the following results.

Applicant's election of species a, including linking claim 1 and 16 is noted.

Hence, claims 6-15 are withdrawn from consideration as being drawn to non-elected species. Claim 2 has been canceled.

Claim Objections

Claim 17 recites in line 2 "wherein the step shaped dielectric film"; however, there is no antecedence for such. The examiner suggests replacing "the" with ---- a ----.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 5 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 has been amended to read "is designated by a notation wp" The examiner does not agree with such. As noted in the figure (figure 10) widths of the lattices at the first through fourth stage is designated by a plurality of notations, including p/2 and w, not wp as now recited.

With respect to claim 20, this claim recites, "forming a light separating unit", which the examiner interprets as a manufacturing ability. This is not proper, i.e., there are no steps recited in the forming of the light-separating unit recited. Such steps would include those steps necessary to create/place the dielectric film onto a glass substrate.

The examiner considers the limitations of claim 20 to already be present in claim 19 and recommends canceling claim 20.

As far as the claims recite positive limitations, and as interpreted by the examiner the following rejections are made.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1,3-4 and 16 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Katayama.

Under 102 considerations, Katayama discloses in the optical environment a focusing and tracking system using holographic lens with a staircase profile – note figs. 6a and b for instance.

The examiner interprets the system to provide for both the pp and dp tracking abilities as recited in the wherein clause found in claims 1 and 16.

Alternatively, if applicant can convince the examiner that such is not the case, then the examiner would rely upon the acknowledged prior art as described in the disclosure in the paragraph bridging pages 1 & 2 of the specification for teaching such.

Katayama further discloses with respect to holographic lens, various configurations, note the disclosure starting at col. 6 line 34 for instance.

Response to Arguments

7. Applicant's arguments filed 7/24/03 have been fully considered but they are not persuasive. Applicants' argue that there are no tracking systems as defined in the Katayama reference. Applicants' attention is drawn to col. 11 lines 34 to col. 12 lines 44.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 3 above, and further in view of either Kajiyama et al or Taniguchi et al.

The base reference fails to disclose any particular profile ratio. There is a plurality (4 steps) in the grating system.

Kajiyama et al – at col. 15, line 65 to col. 16 line 7 discloses in this environment the ability of having from 4 – 6 steps in the diffraction grating with a particular range of pitches. Such a ratio would then approach .25.

Alternatively Taniguchi et al at col. 3, lines 14-34 also discloses the ability of having a duty ratio r in a range of .4 - .6.

The examiner concludes that the particular formula, relationship as defined in claim 5 is nothing more than an optimization of the holographic lens, and hence an obvious variant – applicant's attention is drawn to ***In re Peterson, 65 USPQ2nd 1379.*** The motivation for varying the efficiency of the holographic lens is to optimize its construction and hence its interaction within the optical system of Katayama and thereby generate appropriate te and fe signals for system performance.

It would have been obvious to modify the base system as relied above with respect to claim 3 and modify such with the additional teaching from either Kajiyama et al or Taniguchi et al, motivation is to optimize system parameters in order to achieve the separation of the first order diffracted beams.

Response to Arguments

9. Applicant's arguments filed 7/24/03 have been fully considered but they are not persuasive. The examiner concludes that such claim terminology is merely an optimization of the system parameters established by either Taniguchi et al or Kajiyama et al and as discussed in the above decision such optimizations are obvious to those of ordinary skill in the art.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 above, and further in view of the acknowledged prior art.

Applicants' depiction of the acknowledged prior art discloses such limitations in order to establish proper beam separation.

It would have been obvious to modify the base system as relied upon above with respect to claim 1, with the acknowledged prior art, motivation is to properly separate the reflected beam(s) accordingly.

Allowable Subject Matter

11. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Furthermore, claim 17 would be allowable as well if in addition it corrected for the above minor claim objection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Coombs is cited as also illustrative of a beam separating system having a first and second optical element wherein the second is a diffraction grating – see figure 1. This reference could be relied upon in place of Katayama as the primary reference.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Hard copies of the application files are now separated from this examining corps; hence the examiner can answer no questions that require a review of the file without sufficient lead-time.

Any inquiries concerning missing papers/references, etc. must be directed to Group 2600 Customer Services at (703) 306-0377.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Aristotelis M Psitos
Primary Examiner
Art Unit 2653

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